

ICR Corrections Update

- JES event strip
(p11.11/p11.12.01)
- ICR correction from
p11.11/p11.12.01



P11.11.00 SmallTuple

- **Strip Sample p11.11.00**

- Runs 162006 - 163647 (whatever was reconstructed with p11.11 as of Oct. 1)
- Number of Events processed: ~10M
- Number of Events in smalltuple: 419,186
- data is in:

/rooms/kitchen/imperial/goussiou/p11.11

- **Strip Sample p11.12.01**

- Runs 164016 - 164999 (whatever was reconstructed with p11.12 as of Oct. 4)
- Number of Events processed: ~6.1M
- Number of Events in smalltuple: 318,422
- data is in:

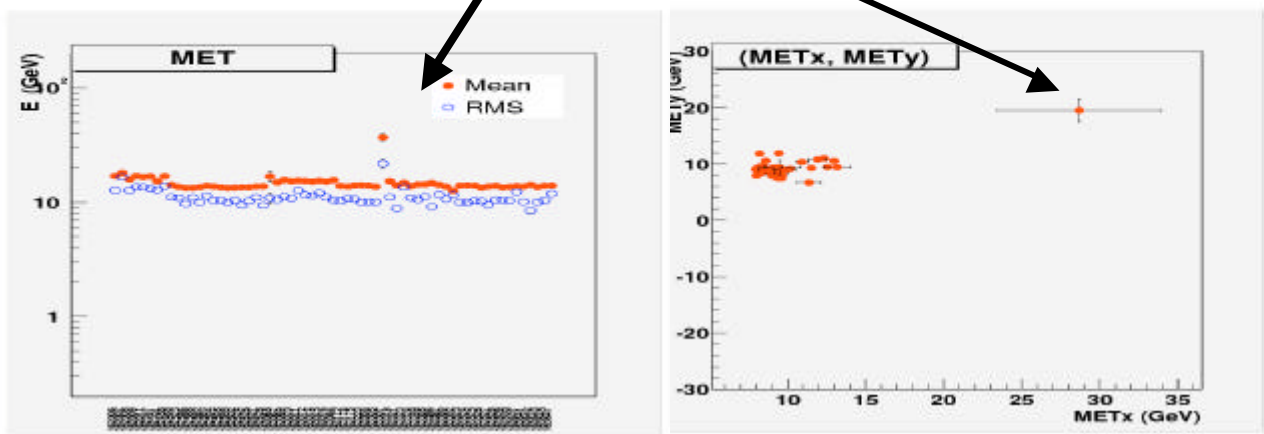
/rooms/kitchen/imperial/goussiou/p11.12

- **See full documentation at:**

<http://home.fnal.gov/~odell/D0/JES/StreamDataIndex.html>

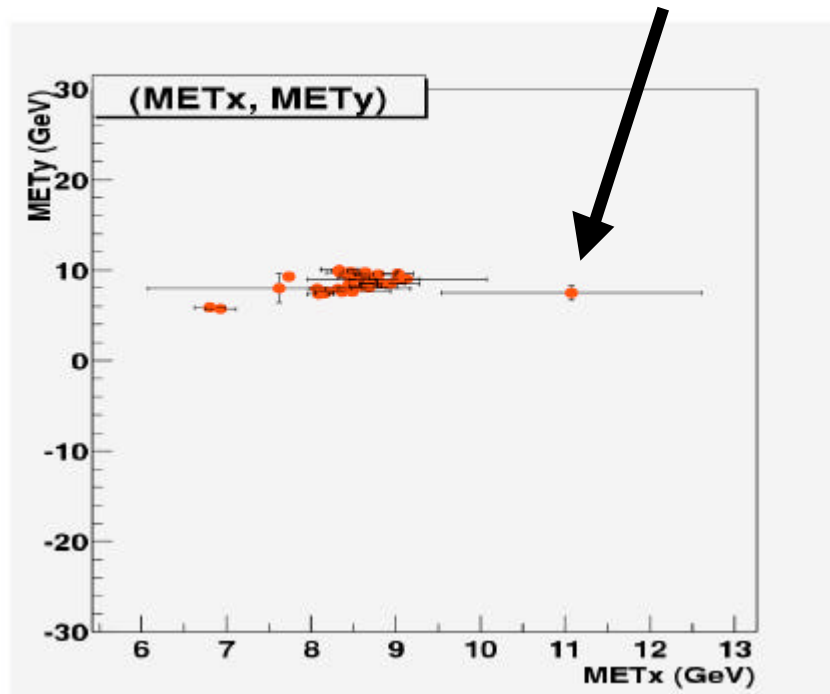
Results of "bad run" Finder

- For the p11.11 strip I ran the "bad run finder"
 - Looks at average MET/run
 - Found 1 bad run: 163307
 - Ia finds more -- why don't I?



Results of “bad run” Finder

- “bad run finder” for the p11.12 strip
 - Found 1 marginal run: 164405





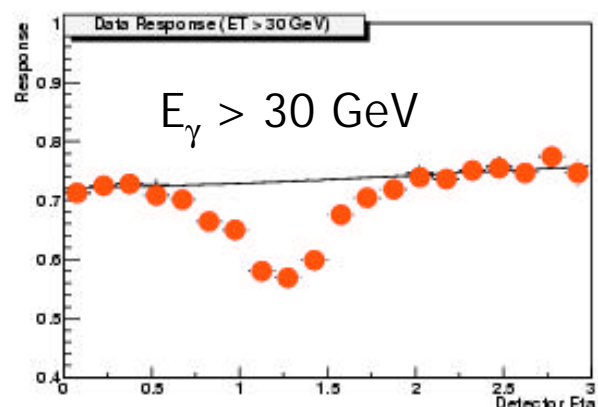
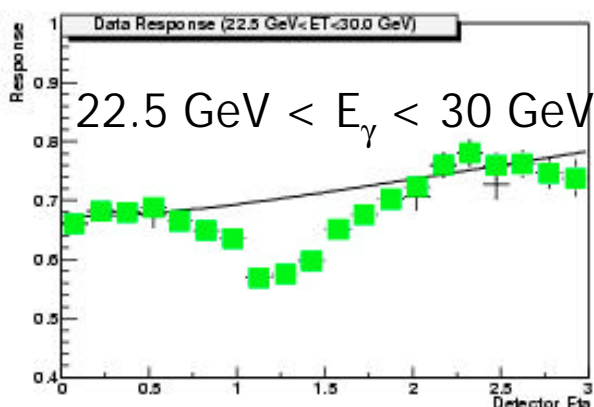
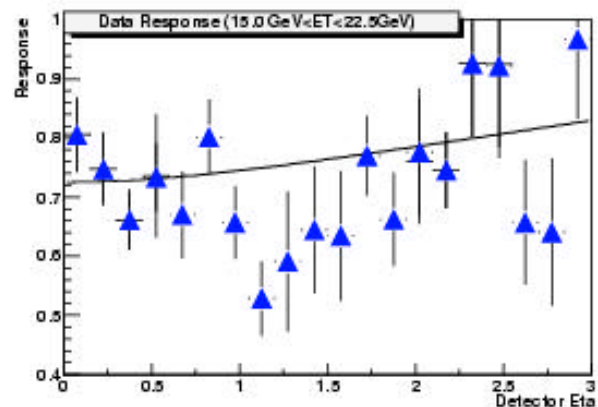
ICR correction for p11.11

- **ICR correction - usual analysis**
- **Noteable cuts**
 - $|h| < 0.8$ for the photon
 - even though the L1 extends further, I did not want to use a photon in the ICR region. I should look at the photon $1.8 < |h| < 2.4$ separately (?)
 - Used EMScale v 2.0
 - Used JetCor v. 2.1 for cryo factor/offset

ICR correction for p11.11

- Data Energy Bins with Cosh(E) fit overlaid

$15 \text{ GeV} < E_\gamma < 22.5 \text{ GeV}$

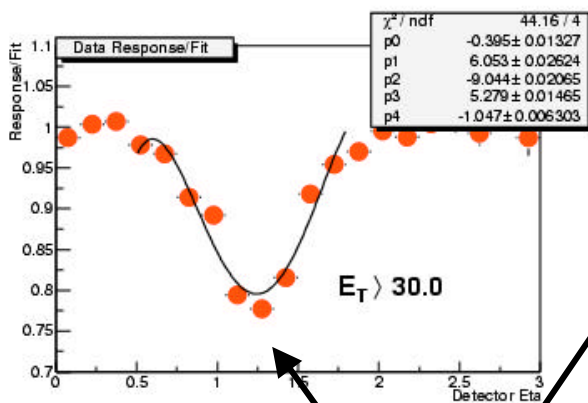
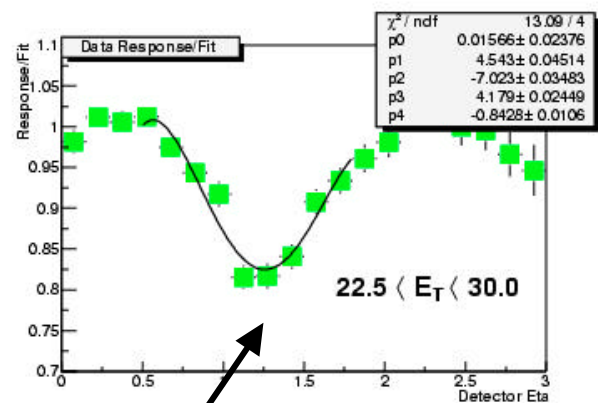
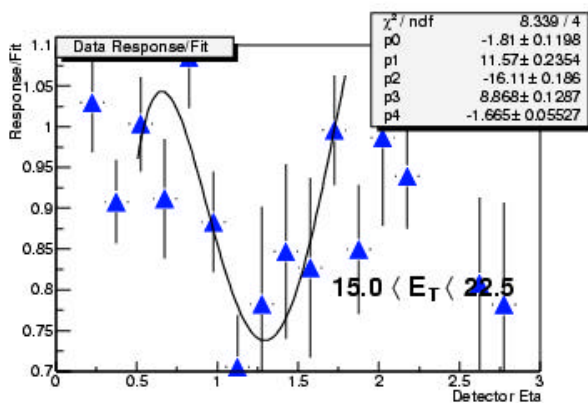


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ICR correction for p11.11

- ICR correction- Data/Cosh fit for each energy bin



Note low point is at
 $|\eta| \sim 1.3$

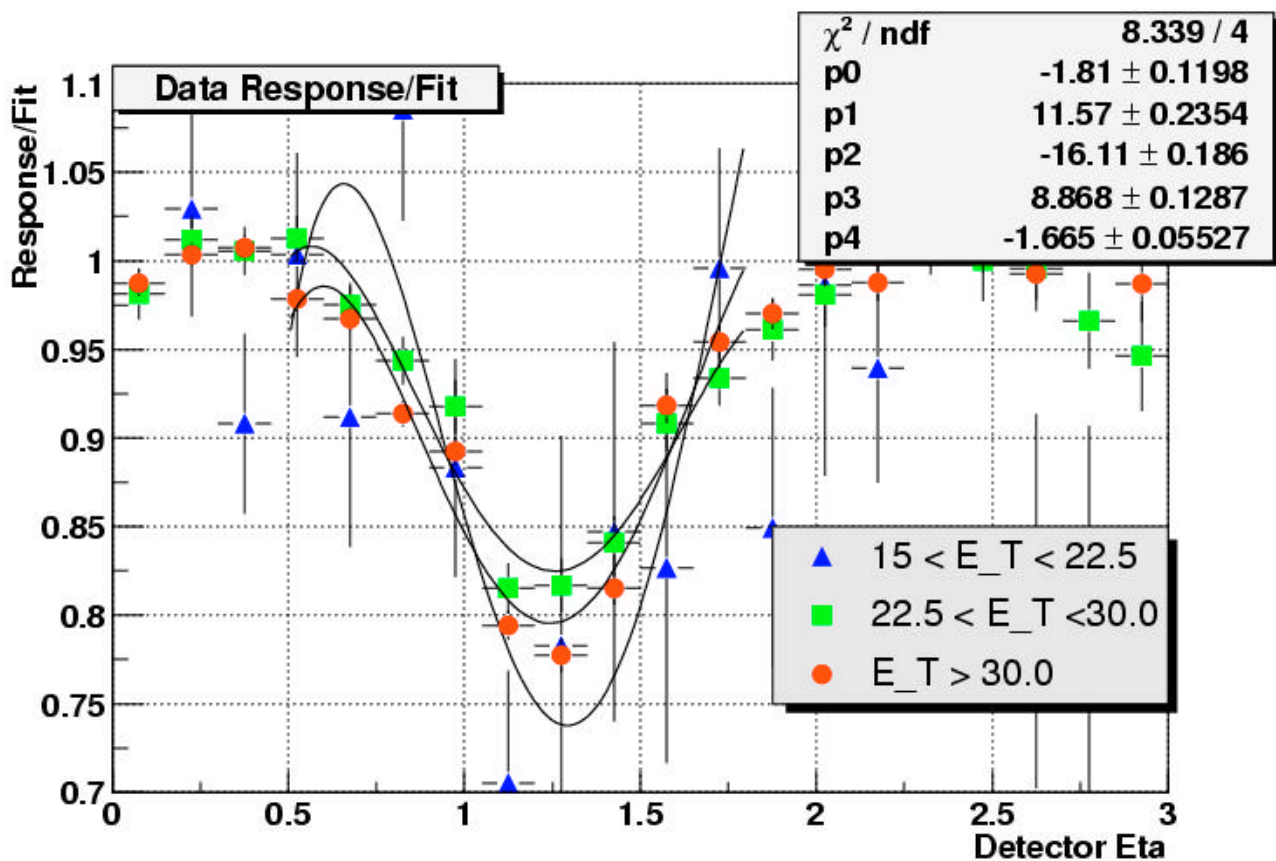
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ICR correction for p11.11

■ ICR correction - usual analysis



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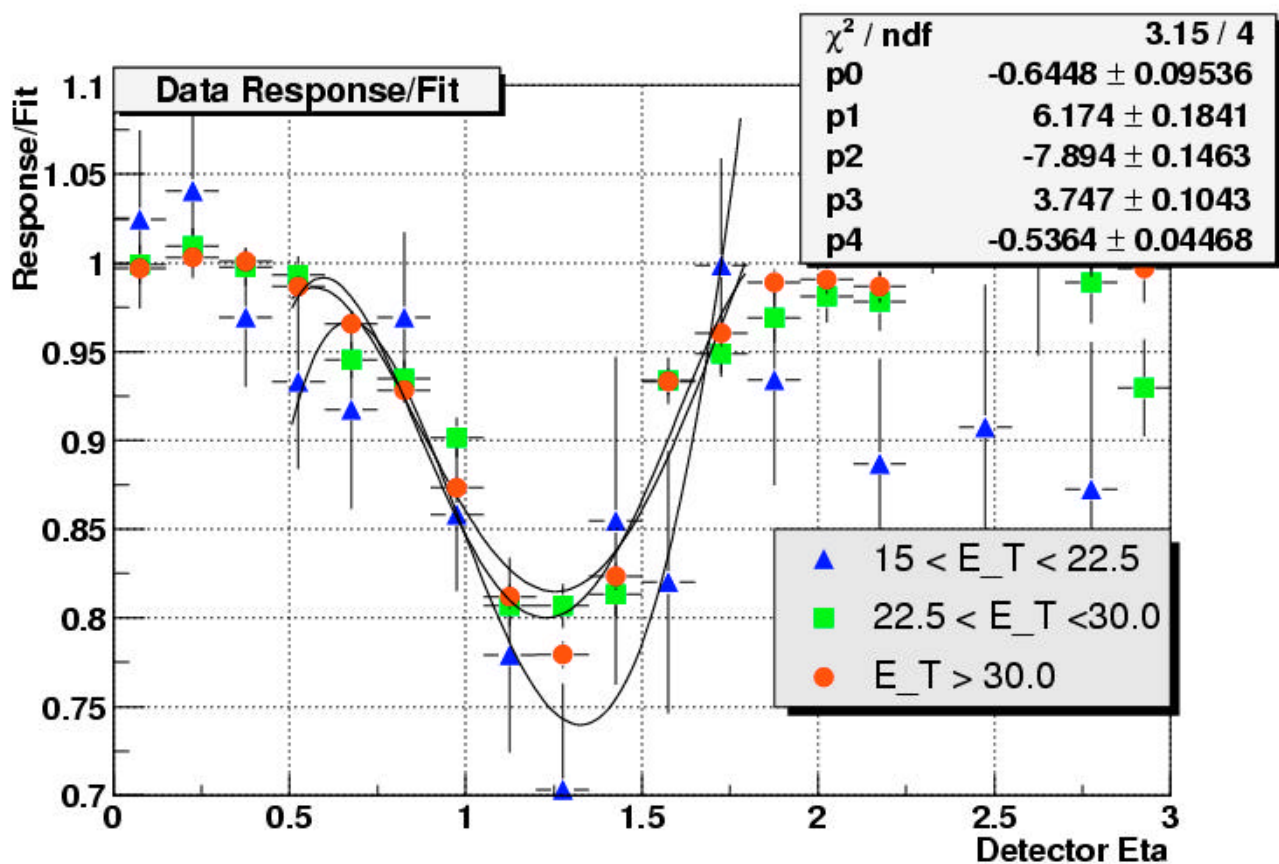
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ICR correction for p11.11 and p11.12.01

- **ICR correction - usual analysis**
- **Noteable cuts**
 - $|h| < 0.8$ for the photon
 - even though the L1 extends further, I did not want to use a photon in the ICR region. I should look at the photon $1.8 < |h| < 2.4$ separately (?)
 - Used EMScale v 2.0
 - Used JetCor v. 2.1 for cryo factor/offset

ICR correction for p11.11+p11.12



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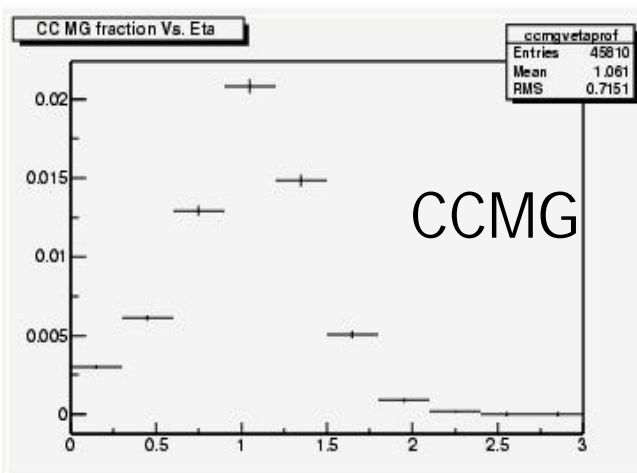
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ICR detectors - Jet Energy Fraction vs. η

CC MG

MaxF ~ 0.022

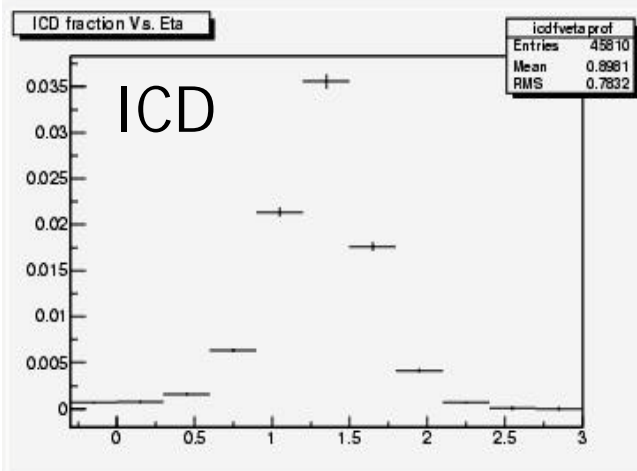
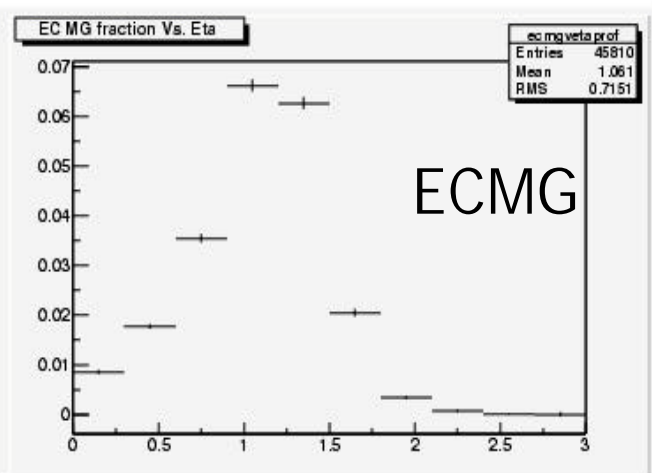
Max $|\eta| \sim 1.1$



EC MG

MaxF ~ 0.07

Max $|\eta| \sim 1.2$



ICD
MaxF ~ 0.037
Max $|\eta| \sim 1.4$

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ICR correction - Next Steps

Wrapup “the usual analysis” for v2.3

- Compare
 - $|h| < 0.8$ for the photon
 - $|h| > 1.8$ for the photon
- Need latest cryofactor/offset corrections for consistency
- Need more statistics!

Refinements

- Look at correcting the ICR region by correcting ICD/ECMG/CCMG separately
- Need p11.11 MC!
- Would like to incorporate results from MIP studies in gap detectors